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DIGEST OF THE RETURN

ORDERED BY THE LEGISLATIVE COUNCIL

OF ALL

THE DEATHS (2143) FROM PHTHISIS

*In Melbourne and Suburbs,
During the years 1865—1869, and first half of 1870,*

FORMING

A Sequel to the Essay on Phthisis,

ETC. ETC.

BY

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MELBOURNE :

STILLWELL & KNIGHT, 78 COLLINS STREET EAST,

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P R E F A C E.

The original theme of the Essay to which this is supplementary was the proof of a statement which had been called in question—to wit, the great prevalence of phthisis in this place. The inaccessibility of certain statistical information having caused that Essay to be to a certain extent incomplete, the author has, through the interest which it excited, been enabled by legislative action, to supply the hiatus ; hence the present publication, from which it will be seen that, as was stated at the outset, of 22,282 deaths from all causes, in Melbourne and suburbs, during five and a-half years, 5,132 occurred between the ages of 20 and 45 years, and that of these, 1,563 or nearly 1 in 3 were from phthisis.

The following summary of the contents of the Parliamentary Return referred to has been prepared with the most scrupulous care ; but should it be deemed necessary to test its accuracy by a reference to the original documents, these will be found to show that the digest could not possibly have been more completely trustworthy even if it had been compiled under immediate official supervision.

W. T.

PROCEEDINGS OF THE LEGISLATIVE COUNCIL.

TUESDAY, NOVEMBER 1, 1870.

STATISTICS OF PHTHISIS.

The Hon. J. CUMMING moved: "That there be laid upon
"the table of this House a return from the Registrar-
"General of the numbers who had died from phthisis in
"Melbourne and its suburbs, during the years 1865-6-7-8-9,
"and also during the first six months of 1870; specifying
"the district, sex, age, occupation, place of birth, dura-
"tion of illness, and period of residence in Australian
"Colonies."

Mr. T. T. A'BECKETT said the return would be very voluminous if it were made out for the whole colony; but as it was required for scientific purposes there would be no objection to furnish it, provided statistics were made out for Melbourne and suburbs only.

Mr. CUMMING replied that he would accept a return for Melbourne and the suburbs only, and the motion was agreed to.

TUESDAY, DECEMBER 6, 1870.

DEATHS FROM PHTHISIS.

The Hon. T. T. A'BECKETT laid on the table, pursuant to order of the House (dated November 1), a return from the Registrar-General of the number of persons who had died from phthisis in Melbourne and its suburbs during the years from 1865 to 1869, both inclusive, and also during the first six months of 1870, specifying the district, sex, age, occupation, place of birth, duration of illness, and period of residence in the Australian Colonies.

The return, which, though very voluminous, was unaccompanied by any summary of its contents, was ordered to be printed.

SUPPLEMENT.

“ Phthisis is very common and malignant in Australia.”

DR. WATERS.

Two thousand one hundred and forty-three deaths from phthisis in five and a half years, in a population of a hundred and seventy thousand, is a high ratio, showing almost beyond the need of further comment, the extent to which the disease prevails in this part of Australia.

It has already been explained why certain questions concerning that large mortality scarcely admitted of complete answer from the few statistics at public disposal, there being no authority for allowing access to more without special order of Parliament. Returns for the first quarter of the year 1870 only were available, but as that short period might

have been exceptionably unfavourable or the reverse, the questions were left undecided till further returns were had. These have now been obtained, for early in the past session an order was passed for a list of the leading details of all deaths from phthisis, in Melbourne and Suburbs, during the last five and a half years. The list is now printed as compiled by the Registrar-General, and is thus an authentic document, easily accessible to all. Analyses of details can now be made, to ascertain how far results meet the requirements of the investigation, and show how widely general experience differs from commonly held belief.

This method of investigating the causes of a widely prevalent malady is the true one, according to the opinion of one of the most philosophical physicians of his age or country—a physician whose philosophy is still a guiding principle in modern medicine. Of this method Dr. Alison observes :—

“ It is, however, generally agreed among
“ medical men, that to questions regarding the
“ external causes of disease and the means of
“ their prevention, statistical evidence, or the

“numerical method of inquiry, is chiefly applicable, and on a little consideration of such questions the reason of this is usually sufficiently obvious.”

Adhering to these sound principles of discussion, the writer refrains from adducing illustrative examples, and refuses to listen to particular histories, for or against the main argument; preferring to abide by the results of evidence drawn entirely from public records open to all, and disregarding accounts of isolated instances.

Many examples could be given of the wisdom of this rule, where one may suffice. An appeal was made by a physician of the Brompton Hospital, for the Colonial Office to organize a large scheme of emigration of consumptive people to these colonies, on the plea that one of his patients had been cured by an Australian climate. So earnest were the representations of this supposed cure that, through the liberality of the Emigration Commissioners, a special correspondent was despatched to make further inquiries on the spot. The results of this singular mission were to have been communicated to the Colonial Office, but they have never

been given to the world, the early demise of the person whose reported cure formed the hypothesis for the proposed experiment prematurely ending the project. The novel mode of giving publicity to a particular instance of the curative power of the climate shows the necessity of exacting proof. Here was a widely published case of alleged cure by change of climate, held forth as an inducement to others to adopt the same course, publicly urged upon Government as a reason for its authoritative action, by medical men in positions giving such weight to their assertions as almost compelled concession ; and yet the whole string of argument spun from the "cure" of one who was quietly resting in the grave ! Painful as it is to re-awaken references of this kind, dragging as it were from silence of the tomb the memories of the dead, necessity yet justifies the allusion. This is not done in idle discussion of a frivolous topic or in levity ; but in a crusade for truth, involving in all candour questions of life or death, suffering or relief from suffering, aggravated or ameliorated disease. Into such it is not unpardonable to import any one sad case injudiciously exalted

into a typical illustration of the healing virtue of a climate, and as such challenging universal public attention, when it serves to prove, rather, that public data are the only admissible evidence. In finally disposing of a painful theme, and deeply regretting that any turn of discussion should constrain to violate what must ever be held sacred, whatever further allusion may be made in all sincerity to individual cases, on this occasion the truth shall be tested solely on the principles laid down by Dr. Alison as the only valid method. Some may attach infinitely more significance to one case the minute history of which may happen to be intimately familiar to them, than they would concede to accurate accounts of a thousand others whose details can only be gleaned from a few leading facts noted down in public records; but such people are exceptional in their modes of logic, in their oddity not greatly disturbing the general current of convincing facts.

As the mortuary returns examined at the Melbourne Hospital extended over a term of five years, affording ample scope for fair averages, and tests of the increase or decrease

of numbers affected, so should the returns of the general population embrace a like sufficiently long period, to yield facts enough to warrant a deduction. By this alone can the errors of a single quarter be covered. It is not now difficult to find how many deaths took place in and outside the hospital, from the same disease during the same space of time. The extra half year has been included, to bring the inquiry to the latest date.

In making such a summary of this long list of two thousand cases, as will tell their instructive tale in a simple way, they have been arranged to show length of residence and duration of illness, that, by comparing the two factors, it may be found what proportion had come to the colony in health, how long they had remained so, and how many had most probably, or certainly, arrived in hopeless sickness. It may possibly be objected to any conclusion from this comparison, that many of the cases, for aught that appears in their histories, may have had, at the time of arrival, what is frequently spoken of as "the seeds of the disease" latent—for metaphors and medical theories always

indulge one another ; or, it may be averred that, an active disease may have been checked temporarily, before the fatal renewal, and there is nothing uncommon in so arguing against facts by mere conjectures and fanciful assumptions. It is indeed a very ordinary supposition of ignorance that phthisis never is an acquired but invariably is a hereditary complaint. This is but the consequent prejudice proceeding from a century of erroneous medical doctrine. The persistency of the fatal fallacy among the laity is little astonishing when so many professional men to this hour still cling to the idea. But so opposed is the belief in transmissive theories of tuberculosis to recent thought, that one of the profoundest masters disputes it altogether, maintaining with much force of reasoning that no specific diathesis, but only a certain feebleness of frame, is conveyed to offspring from parent, the subject of any exhausting malady. Others, in reply, say this weakness may still be called diathesis ; but that would be an unscientific misnomer. Several distinct chronic diseases may equally give a feeble progeny, but could not all transmit a diathesis ; they may all

confer the delicate constitution upon which disease is easily engrafted, but could not all convey one and the same specific poison of tuberculosis. Of the two forms the acquired is usually the more acute and fatal, yet is the more amenable to early treatment.

As far as the facts supplied by those two thousand cases warrant a decision on questions under consideration, that decision is conclusive enough; but so contrary is it to the ordinary reputation of the climate for great salubrity, that judgment hesitates before pronouncing the severe verdict. In deciphering the facts, it plainly appears that an enormous majority had been many years in the colony before being overtaken by fatal illness. The average period of residence in the Australian colonies of persons not born there appears to be above eleven years; while the average duration of illness of all classes is less than one and a-half years, thus showing a term of about ten years of health. There is, doubtless, often an ambiguity as to the date of onset of disease, but as the dates are always given at the registration of the cause of death, the burden of proving them inaccurate rests

with those who impugn their accuracy. In deciding between probabilities, the least improbable must be accepted. In dealing with facts, the simple enough conclusion is, that of the whole two thousand cases, the persons had been on an average ten years in the colony before being affected.

If it be doubted whether the length of illness be correctly estimated, or thought that a longer term must be allowed for the average duration, then it will follow that a vast number of phthisical people must constantly reside about this city. If the average should rise from a little over one year to, say, four years or more, as some contend, then, to give 400 deaths per annum there must be at least some 1600 or more such patients always about ; and if to these be added the great numbers supposed sometimes to be in a favourable way of becoming cured, and in addition there be also included the very many cases which are in the course of every year sent by medical men or friends for various reasons away from the colony, to other colonies and to Europe, the grand total of phthisical people usually dwelling in or immediately around

Melbourne would approach to nearly 2000, at least, of whom the greater portion would be adults under middle age. But surely the estimated duration is much more probably correct than that which would require so great a multiplication of cases to sustain it.

In Table I. (p. 12), prepared after carefully collating the returns, the length of residence and duration of illness are contrasted, at short intervals; those cases where no exact information is given are separated and marked off as unknown, and amount to about a third of the whole number. Of this large proportion nothing definite can be stated. Life, in some instances, may have been prolonged, or, like the majority, the term of illness may have been brief; it is gratuitous to assert and idle to conjecture, except from analogy of the many, respecting whom precise statistics have been elicited. Of the total number, 186 were natives, of European parentage, and in nearly all the disease had lasted less than one year; from which it would appear that in them phthisis is not a lingering illness, a fact that will excite apprehension for the future. The paucity of facts among the few

natives who have yet reached adolescence may not justify a final opinion ; but enough exists to put people on the alert. From the approaching generation more data will necessarily be forthcoming, but it will neither be honourable for the medical profession nor creditable to the prescience of statesmen should those data prove unfavourable. If any value be attached to the warnings of such men as Simon, they at least should have a hearing, as to the measures required to prevent that result.

The second table (p. 14) will be found to show that, after excluding all whose residence and illness were unspecified, and also those born in the colonies, the large number of 1167 are left to supply dates for contrasting the average length of residence with the average duration of illness. By this selected number it is plain that only a very small proportion have been under one or two years in the colony, by far the greater number having evidently been long resident before health had given way to disease evidently acquired during the period of residence. Such, at all events, is the information conveyed by statistics.

TABLE I.
MELBOURNE AND SUBURBS—Deaths from Phthisis during the years 1865-6-7-8-9, and also during the first six months of 1870 ;
showing the Duration of Illness and Period of Residence in the Australian Colonies.

PERIOD OF RESIDENCE IN THE AUSTRALIAN COLONIES.	TOTAL DEATHS FROM PHTHISIS.	DURATION OF ILLNESS.																Some Years.	Long Standing.	Unknown.
		Under 1 Month.	1 Month and under 3 Months.	3 Months and under 6 Months.	6 Months and under 12 Months.	Some Months.	1 Year and under 2 Years.	2 Years and under 3 Years.	3 Years and under 4 Years.	4 Years and under 5 Years.	5 Years and under 6 Years.	6 Years and under 7 Years.	7 Years and under 8 Years.	8 Years and under 9 Years.	9 Years and under 10 Years.	10 Years and under 11 Years.	11 Years and under 12 Years.	12 Years.		
Under 1 Month	24	...	4	2	...	...	3	3	2	...	...	...	...	...	...	...	...	...	...	9
1 Month and under 3 Months	26	...	1	...	2	...	1	1	1	...	1	...	...	...	...	...	...	...	...	18
3 Months	22	...	...	...	1	...	3	3	...	...	...	...	...	...	...	...	...	...	...	14
6 " " " "	33	...	...	2	3	...	...	6	4	...	...	...	...	...	...	...	...	...	...	18
Some Months	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
1 Year and under 2 Years	48	1	1	7	6	...	8	...	...	...	...	...	...	...	...	...	...	...	...	21
2 Years	61	1	2	3	8	...	3	7	4	1	...	...	...	...	...	...	...	...	...	32
3 " " " "	55	2	2	5	10	1	3	5	2	...	2	...	...	...	...	...	...	...	2	21
4 " " " "	54	1	1	4	7	...	7	2	2	1	...	...	...	...	...	...	...	...	1	28
5 " " " "	65	1	4	5	13	...	4	5	6	2	2	...	...	...	...	...	...	...	...	25
6 " " " "	64	...	...	3	14	...	13	9	2	1	...	...	...	2	...	...	...	...	...	20
7 " " " "	80	3	...	5	15	1	14	7	3	2	1	...	1	...	...	...	...	...	...	25
8 " " " "	73	1	5	7	14	...	13	6	...	...	1	...	...	...	...	...	...	...	...	26
9 " " " "	77	2	3	6	14	...	7	7	3	...	...	...	...	...	...	1	...	...	2	32
10 " " " "	132	2	5	10	19	2	23	13	7	1	1	1	...	1	...	...	...	1	...	45
11 " " " "	103	3	4	10	10	...	19	9	3	2	1	...	...	...	1	...	...	...	2	38
12 " " " "	163	1	3	20	27	...	24	19	6	4	2	1	1	...	...	...	...	1	...	51
13 " " " "	123	2	4	8	15	1	21	9	6	4	4	...	1	...	...	...	...	2	...	45
14 " " " "	150	2	3	12	26	3	25	13	10	3	2	...	...	1	...	...	...	...	...	50
15 " " " "	101	2	6	9	19	...	15	8	7	4	2	...	...	...	...	1	1	...	4	22
16 " " " "	86	3	4	5	14	1	13	13	2	2	1	1	...	1	...	1	1	...	1	23

[illegible]

Average period of residence in the Australian Colonies of persons not born there, 11.34 years.
Average duration of illness (all classes), 1.325 year.

TABLE II.

MELBOURNE AND SUBURBS.—Deaths from Phthisis (excluding those of persons whose period of residence in Australia, or the duration of whose illness, is unknown; also those of persons born in the Australian Colonies) during the years 1865-6-7-8-9, and the first six months of 1870: showing the Duration of Illness, and the Period of Residence in the Australian Colonies.

PERIOD OF RESIDENCE IN AUSTRALIAN COLONIES.		TOTAL.	DURATION OF ILLNESS.				
			Under 1 Year.	1 Year and under 2 Years.	2 Years and under 5 Years.	Total under 5 Years.	5 Years and Upwards.
Under 1 Year	...	44	15	7	21	43	1
1 Year and under 2 Years	...	27	15	8	4	27	
2 Years	5 "	86	47	13	24	84	2
Total under 5 Years	...	157	77	28	49	154	3
5 Years and under 10 Years	...	229	118	51	51	220	9
10 "	15 "	433	192	112	109	413	20
15 "	20 "	230	109	48	58	215	15
20 "	30 "	101	50	22	25	97	4
30 "	and upwards	17	7	5	2	14	3
Total ...	...	1,167	553	266	294	1,113	54

As the causation of phthisis becomes more and more one of the great problems that "wait on dense population," it is desirable that the facts brought out in this parliamentary return should contribute towards its solution. For this purpose the numbers of deaths from phthisis in every one of the various districts have been separately tabulated. To those who are familiar with these districts, it will readily appear that the greatest mortality is invariably in the most densely crowded localities; but it would be utterly impossible at present to calculate what relation that mortality bears to actual population on a given area; and it is therefore expedient to defer this task until after the next census, to be taken early in April, when it will be an easy matter to accomplish it. In the meantime the publication of the subjoined table will facilitate the work for any one disposed to undertake it.

Much invaluable information on the point will be found in a most skilfully-written paper by Mr. Hammack, in the volume for 1859, of "The Transactions of the Social Science Association," where facts upon facts are furnished in evidence of the tendency of the deaths from phthisis

to increase with the density of population, irrespective of all climatic peculiarities. Mr. Hammack had, indeed, to explain how consumption must not be looked upon as a disease peculiar to the English climate; and that “density of population exercises a powerful influence in producing a high tubercular mortality.” So fully is this element in the causation of phthisis recognised, that the best writers discuss all other elements with direct reference to it. Thus, Dr. Waters, in reviewing the various arguments employed to prove a certain immunity from phthisis by the inhabitants of places at great altitudes, as in the high table-lands of different countries, observes, “I have little doubt that, *per se*, the climate of these higher regions does not confer immunity from the disease, and that, under circumstances of dense population and overcrowding, we should see the disease largely developed.”* Even Dr. Herman Weber himself, who was amongst the earliest advocates, if not the actual originator of the idea, does not attribute the exemption solely to alti-

* Diseases of the Chest, p. 241.

tude, distinctly stating as he does in his original paper that he "might mention many other "circumstances of great importance, amongst "them the scarcity or density of population."* In the lower lying often damp places in some large towns, land is usually less costly and rents low, houses small and crowded, drawing together a dense population, among whom new causes come into operation that are unknown in the elevated places referred to. The following table (Table III.) has thus a peculiar interest in this aspect of the discussion of the causes of phthisis in this colony.

It deserves mention that in the district in which the greatest mortality occurred, South Melbourne, the Melbourne Hospital is situated, and that in the same district there is the greatest number of blanks in the column for stating the duration of illness. Fortunately the hiatus does not vitiate an inquiry completed without hospital data, valuable adjuncts though they undoubtedly would be.

* Med. Chir. Trans., p. 229, 1869.

TABLE III.

DISTRICTS.	TOTAL.	1865.	1866.	1867.	1868.	1869.	1870 (6 months).
Brighton ...	25	3	3	5	5	6	3
Brunswick ...	22	4	2	6	1	4	5
Caulfield ...	3	1	...	...	...	1	1
Cheltenham ...	7	1	...	1	3	...	2
Collingwood ...	281	48	48	48	48	61	28
Emerald Hill ...	103	15	17	26	17	21	7
Essendon ...	6	2	...	2	2	...	...
Flemington ...	10	3	...	3	1	2	1
Footscray ...	11	2	2	2	2	1	2
Hawthorn ...	37	10	1	9	4	10	3
Heidelberg ...	10	...	5	2	1	1	1
Keilor ...	2	...	...	...	...	1	1
Kew ...	18	4	4	...	4	5	1
Malvern ...	5	...	3	1	1	...	...
Melbourne North ...	352	58	58	54	58	73	51
Melbourne South ...	824	135	133	143	157	178	78
Northcote ...	49	4	15	8	11	8	3
Pentridge ...	17	5	2	3	3	2	2
Prahran ...	56	9	11	11	10	8	7
Richmond ...	134	33	19	21	23	26	12
Sandridge ...	32	3	2	8	6	10	3
South Yarra ...	47	14	6	4	7	12	4
St. Kilda ...	40	3	5	15	2	9	6
Toorak ...	4	1	...	1	...	1	1
Williamstown ...	48	8	11	5	10	8	6
Total ...	2,143	366	347	378	376	448	228

A most material point now presents itself for consideration. Were those 2143 deaths all cases of true phthisis? If it be not possible to trust the diagnosis the matter is at an end. Once admit this doubt, and no more need be said on the question. In similar inquiries the validity of such a doubt is admitted, and, for the purpose of a comparative estimate of its prevalence in different places, phthisis has been classified along with other diseases of the respiratory organs. This method was adopted by Dr. Headlam Greenhow, in a study of the statistics of public health,† because the correct discrimination of chest affections is often a difficult matter, requiring an amount of attention and practice, the possession of which cannot always be relied upon. For this reason alone several diseases of the lungs were joined to phthisis, forming a group of pulmonary affections. This at once got over all difficulties of differentiating diagnosis, but it also ignored the existence of different pathological conditions with distinguishing symptoms, as described by all authors, and pre-eminently in the excellent treatise on

† Trans. Soc. Sc., 1857, p. 371.

Chronic Bronchitis and allied affections, by Dr. Greenhow himself, wherein the differences between bronchitis and ordinary phthisis are closely discussed. If, however, phthisis is to be thus held as not easily definable and separable from other lung affections, because its most frequent origin is in catarrhal pneumonia, bronchitis, and allied inflammatory diseases, as many pathologists, with Addison, Sanderson, and Niemeyer, aver; and rarely if ever in what has been, since Laënnec's time, called the tubercular diathesis, a form of scrofula; then this also must be conceded, that in this city the majority of ordinary pulmonary seizures that end fatally, run into some form of caseous degeneration and disintegration of lung structures commonly spoken of as phthisis. The aggregate of all affections of the respiratory organs is less here than in England, but not the proportion of phthisis. It must either be so, or the returns are all spurious and false, and the medical profession radically at fault. By analogy it is most probable that the returns are correct, and the profession in the right; for in some other countries similar relative proportions in the various pul-

monary diseases prevail, there being in some places greater mortality from ordinary inflammations of the lung structures than from phthisis, and *vice versa* in others.

In the former, acute inflammations tend to quick fatal termination; in the latter they seem to pass into cheesy deposits with subsequent phthisis, and eventually into tuberculosis. Whether this be, if in itself a true theory, a consequence of climatic influences or not, requires proof, but even if proven, it could not show the climate in which such secondary and tertiary pathological changes were frequent, to be exempt from phthisis because of showing on the amalgamating classification a smaller ratio of lung affections.

But most opposed to the plan of Dr. Greenhow, and of infinite practical value, is the clear statement of Mr. Simon, who in reporting to the Privy Council on the effect on phthisis of the drying of the sub-soil according to the suggestions of Drs. Buchanan and Bowditch, asserts that diseases of the lungs other than phthisis undergo no reduction from such improvements; and he states it axiomatically that "neither

“directly nor indirectly did the class of lung diseases fluctuate according to the fluctuations of phthisis.” These facts show that phthisis can be influenced by sanitary improvements, and that the very improvements which limit the spread of phthisis have no effect on the ordinary inflammatory affections of the lungs.

Thus, then, according to the experience of Mr. Simon, as opposed to the mixing method, the cases of phthisis may be segregated from other diseases of the lungs, for all practical or scientific medical and sanitary investigations. The mixing method is clumsy and confusing, and in relinquishing all effort at scientific precision gives over in despair one of the gravest problems of sanitary work at a time when no means likely to rouse the comfortable and indifferent public to the task before them should be left unused.

Nor would this experience of Mr. Simon's be affected by the subdivision of what has till quite recently been set down as phthisis, into phthisis and tuberculosis, the former a common the latter a very rare disease; and although it must now be admitted that most of the observations made

upon this question relate to phthisis rather than to tuberculosis, the social and scientific import of them is in nothing altered. It is affirmed by Niemeyer, who draws this distinction between the diseases named, that “most of the prevailing
“opinions on the statistical statements as to the
“frequent occurrence of tuberculosis in general,
“its greater or less frequency under the influence
“of certain conditions, the geographical distribution of the disease, &c., have only a very
“limited value, because the observations on
“which they are founded refer by no means to
“tuberculosis alone, but also to all those processes which, since Laënnec, have been
“confounded with tuberculosis.”*

The truth of the distinction some may doubt, yet it is such a very important explanation which warrants the saying by Dr. Gull that “the
“word ‘phthisis,’ which has now too often a
“specific value, will dilate so as to include a
“whole genus of chronic affections, which, when
“duly recognised and classified, will afford more
“secure grounds of prognosis, and spare us the

* Lectures on Phthisis, p. 19.

“perusal of worthless records of so-called consumption cured.”*

To a similar effect, the following opinions of Dr. Addison might be added, that:—“When albuminous effusions have proceeded to actual induration, and consequent obliteration of the cellular structure of the lung; the notion of perfect repair and restoration can hardly, I think, be regarded in any other light than that of a pathological absurdity, although the statements advanced by some modern writers on phthisis, would seem to imply that they actually expected the profession to believe in its practicability.” * * * The satisfactory solution of the important question of diagnosis in phthisical disease is calculated, above all things, to extinguish the quackery, and silence the reckless pretensions which from time to time are brought forward, to insult the understanding and shock the better feelings of every upright and really competent member of the profession.”†

But if further proof were demanded of the true

* *Medicine in Modern Times*, p. 183.

† *Guy's Hospital Reports*, 1845. .

phthisical character of the disease which caused those 2143 deaths, and that they were not from pneumonia or bronchitis simply, the ages of the persons would supply it. In the next table the ages have been arranged in quinquennial periods of years, in all cases over five years of age; and show that 1563 of the whole were between 20 and 45 years, and only 580 under 20 and over 45 years. Between 20 and 50 years of age there were 1731, and only 412 under 20 and over 50.

Now on comparing these ages with the ages at which bronchitis and pneumonia are most fatal, it is found that the largest mortality occurs from these latter diseases under 20 years and over 50 years of age. Both in England and in Melbourne more than one half of all the deaths from bronchitis and pneumonia occur under five years of age. The method of ascertaining the average age at death, by adding up the sum of the ages of those who die and dividing the aggregate among the number of deaths, is liable to very material error. To avoid this, the details are given.

TABLE IV.
MELBOURNE AND SUBURBS.—*Ages at Death of Persons who died of Phthisis during the years 1865-6-7-8-9, and during the first six months of 1870.*

	Under 1 month.	1 month and under 3 months.	3 months and under 6 months.	6 months and under 12 months.	Total under 1 year.	1 year and under 2 years.	2 years and under 3 years.	3 years and under 4 years.	4 years and under 5 years.	Total under 5 Years.	5 years and under 10 years.	10 years and under 15 years.	15 years and under 20 years.	20 years and under 25 years.	25 years and under 30 years.	30 years and under 35 years.	35 years and under 40 years.	40 years and under 45 years.	45 years and under 50 years.	50 years and under 55 years.	55 years and under 60 years.	60 years and under 65 years.	65 years and under 70 years.	70 years and under 75 years.	75 years and under 80 years.	80 years and upwards.	Age not specified.	Total.
Males -	...	1	3	6	10	15	6	3	1	35	8	11	33	141	190	203	207	135	111	76	37	22	11	7	2	1	1	1,231
Females	2	...	3	5	10	7	2	...	2	21	7	13	54	152	161	139	142	93	57	29	20	9	12	2	...	1	1	912
Total -	2	1	6	11	20	22	8	3	3	56	15	24	87	293	351	342	349	228	168	105	57	31	23	9	2	1	2	2,143

In the adjoining table the deaths from congestion of the lungs are added to pneumonia, because they are so included in the English tables.

Table comparing the number of Deaths from Bronchitis and Pneumonia in England, and in Melbourne and Suburbs, during the year 1866, to show that, in both countries, over one half were children under five years of age.

DEATHS FROM BRONCHITIS AND PNEUMONIA IN ENGLAND
AND WALES IN 1866.

Diseases.	At all Ages.	Deaths under 5 yrs. of age.
Bronchitis	41,334	16,305
Pneumonia	25,155	17,460
Total	66,489	33,765

DEATHS FROM BRONCHITIS AND PNEUMONIA IN MELBOURNE
AND SUBURBS DURING 1866.

Diseases.	At all Ages.	Deaths under 5 yrs. of age.
Bronchitis	109	60
Pneumonia	102	41
Congestion of Lungs }	65	45
Total	276	146

Those inflammatory affections are peculiarly fatal among children and old people, and as there are relatively fewer old people and more young children here than in England, the circumstance is from this difference in the composition of the two populations, easy enough of explanation, without reference to any climatic differences between the two countries. But the fact in no way affects the ratio from phthisis; because if that ratio be computed at given ages in each place, as from 20 years of age to 45 years of age, it would not alter the result if all the people in the colony were between those ages; the ratio would still continue at 1 in 3, as was before calculated.

There is another singular fact not hitherto referred to, but which should certainly not now be silently passed over, strongly indicating as it does the extent to which phthisis has prevailed in this community, and the class amongst whom it appears to be most common. In the returns of the various causes of death sent to the Registrar-General, by several Friendly Societies, the proportion of deaths from phthisis is beyond all expectation greater than it is amongst the

rest of the population. For example, in the year 1866 the total deaths from all causes were, among old and young members, male and female, 184, and of these 50, or over 27 per cent., were set down to phthisis. Again, in 1867, when the total deaths from all causes were 199, there were 40 deaths, or 20 per cent. of the total, from phthisis. When, therefore, it is considered that in those societies every member is presumed to undergo on entering, and again in exchanging from one society to another, a strict medical examination, before the society's medical officer, by whom the applicant must be pronounced healthy, and especially free from hereditary predisposition to phthisis, to become eligible for admission, this amount of phthisis is rather surprising. It may, perhaps, be replied that this medical inspection, which is meant to be conducted on the same plan as for life insurance, is often perfunctory and superficial, yet even a high degree of remissness would not fully explain why there should be so much phthisis among the members. It is uncertain whether this proportion be higher than among similar societies in England; nor can any means of ascertaining this be found in the

elaborate tables in Mr. Neison's work on the subject. It is, therefore, sufficient to indicate the enormous disproportion in the phthisis death-rate of those societies to that of the general population. The members are mostly artisans, living in the most densely crowded localities, and working in workshops and warehouses where usually little attention is bestowed on systematic hygiene, and supplying the very conditions spoken of by Mr. Simon as most frequently conducing to the occurrence of phthisis.

The health histories of Friendly Associations thus afford corroborative testimony of a convincing kind towards proving how wonderfully little climatic, and how greatly individual circumstances affect the induction of phthisis.

From a very cursory inspection of that section of the returns in which the different occupations are stated, it will appear how exceedingly varied these have been. Almost every profession, trade, handicraft or calling furnishes its quota, but the most frequently recurring in the list are precisely the same as are well known to furnish the largest proportion of victims to the malady in

other countries. Although the list is long it has been reproduced *in extenso*, because its indications may be extremely useful. The occupations of the males seem to be described with sufficient precision, but not so those of the females. Here indeed there is much that is eminently unsatisfactory from its vagueness. Thus, of the 1231 males, an occupation of some kind is mentioned in every instance except 61, in which only it has been omitted to be specified; but of the 912 females, in 21 none whatever is given, while 173 are simply set down as spinsters, 31 as widows, and 530 as wives, although it must be obvious that in numerous instances wives, widows, and spinsters had followed some vocation. This incertitude may or may not vitiate any argument, yet it is difficult to determine what general conclusion can be derived from this part of the analysis further than perhaps this, that married life would not appear to be highly auspicious for those females who are in any way liable, from exposure or predisposition, to become affected with phthisis.

TABLE V.

MELBOURNE AND SUBURBS.—*Occupation of Persons who died from Phthisis during the Years 1865-6-7-8-9, and the first six months of 1870.*

MALES.

OCCUPATION.	NUMBER.	OCCUPATION.	NUMBER.
Aboriginal ...	1	Coachbuilder ...	9
Accountant ...	5	Coachman ...	3
Actor ...	1	Confectioner ...	3
Agent ...	6	Contractor ...	6
Architect ...	2	Cook ...	9
Artist ...	3	Cooper ...	7
Auctioneer ...	1	Coppersmith ...	1
Baker ...	21	Cordialmaker ...	2
Banker ...	1	Corn Factor, Dealer ...	3
Barman ...	4	Cotton Mill Manager ...	1
Billiard-marker ...	2	Dairyman ...	3
Blacksmith ...	19	Dealer ...	8
Boatman ...	2	Draper, Draper's Assist. ...	17
Boilermaker ...	3	Draughtsman ...	1
Bookbinder ...	2	Drover ...	1
Bookseller ...	1	Engine-driver ...	2
Boot, Shoe Maker ...	34	Engineer ...	18
Boy (5 to 15 years) ...	19	Engraver ...	1
Brassfounder ...	1	Farmer ...	18
Brewer ...	1	Fireman ...	1
Bricklayer ...	6	Fisherman ...	1
Brickmaker ...	4	Flock Factor ...	1
Broker ...	3	Frenchpolisher ...	4
Builder ...	3	Fruiterer ...	2
Butcher ...	15	Gardener ...	15
Cab Proprietor ...	5	Goldbeater ...	1
Cabinetmaker ...	12	Goldsmith ...	1
Carpenter ...	29	Government Officer ...	2
Carrier ...	1	Grocer, Teadealer and Assistants ...	12
Carter ...	9	Groom ...	13
Chemist ...	9	Hairdresser ...	3
Child (1 year to 5 years) ...	25	Harnessmaker ...	2
Chimney Sweep ...	1	Hatter ...	3
Clergyman ...	3	Hawker ...	8
Clerk ...	85	Herbalist ...	1
Clicker ...	1	Hide Salesman ...	1
Coach, Cabdriver ...	12		

OCCUPATION.	NUMBER.	OCCUPATION.	NUMBER.
Hotelkeeper ...	24	Settler, Squatter ...	5
Infant (under 1 year) ...	10	Share Broker ...	1
Iron Merchant ...	1	Shepherd ...	2
Ironmonger ...	8	Ship Steward, Servant	5
Ironmoulder ...	1	Shipwright ...	4
Joiner ...	4	Silk Manufacturer ...	1
Laborer ...	161	Soldier ...	7
Lawyer... ..	6	Solicitor ...	3
Lithographer ...	2	Stationer ...	4
Lodginghouse Keeper	2	Stevedore ...	2
Maltster ...	1	Stockman ...	3
Marblepolisher ...	1	Stoker ...	1
Mason ...	30	Stone Carver ...	1
Medical Man ...	6	Stone Cutter ...	2
Mem. House of Comns.	1	Storekeeper ...	7
Merchant ...	12	Storeman ...	7
Miller ...	2	Student... ..	2
Miner ...	32	Superintendent ...	1
Musician ...	2	Surveyor ...	1
No Occupation ...	6	Tailor ...	22
Occupation not stated	61	Tallow Melter ...	1
Overseer ...	1	Tanner ...	1
Packer ...	1	Tin Plater ...	1
Painter ...	10	Tobacconist ...	2
Photographer ...	3	Toll Collector ...	1
Pianoforte Maker ...	1	Traveller, Commercial	8
Plasterer ...	3	Turner ...	4
Plumber ...	6	Upholsterer ...	5
Police ...	16	Vagrant ...	1
Porter ...	3	Vine Dresser ...	1
Poulterer ...	1	Vocalist ...	2
Printer, Compositor ...	26	Waiter ...	5
Prisoner ...	2	Warder ...	4
Quarryman ...	4	Wardsman ...	1
Railway Official ...	5	Warehouseman ...	9
Reporter ...	2	Watchmaker ...	4
Saddler... ..	6	Wheelwright ...	4
Sailmaker ...	2	Whipmaker ...	1
Sailor, Ship's Officer ...	70	Whitesmith ...	1
Salesman ...	2	Wood Carver ...	1
Lawyer... ..	2	Woolsorter ...	1
Schoolmaster, Teacher	14		
Scissors Grinder ...	1	Total Males	1,231
Secretary ...	1		
Seedsman ...	1		

F E M A L E S .

OCCUPATION.	NUMBER.	OCCUPATION.	NUMBER.
Barmaid ...	2	Milliner ...	1
Child (1 to 5 years) ...	11	Needlewoman ...	5
Cook ...	2	Nurse ...	2
Domestic Servant ...	76	Occupation not stated	21
Dressmaker ...	8	Shopwoman ...	1
Fancyworker ...	1	Spinster ...	173
Girl (5 to 15 years) ...	20	Tailoress ...	4
Housekeeper ...	8	Widow ...	31
Infant (under 1 year)	10	Wife ...	530
Machinist ...	4		
Mantlemaker ...	1	Total Females	912
Midwife ...	1		

In closing this discussion for the present, it is, perhaps painfully, gratifying to know that every statement first put forth has been fully substantiated wherever additional evidence has been obtainable. In not one solitary point of any magnitude has there arisen the slightest need of retractation, qualification, or revision, the more extended examination intensifying rather than lessening the force of earlier impressions. On one or two trivial matters a few words of further explanation might have been introduced ; but, as the topics could not well be reverted to without re-opening undesirable controversy, it is surely better to leave them at rest. More satisfactory would it have been had the power of opposing facts shewn that former statements were based

on error, and that facts by stronger facts assailable could be controverted and refuted. But as they were not originally asserted in a spirit of destructive criticism, so now may they serve an honest purpose of getting at the truth. Neither reckless nor unguarded, they were nevertheless impugned by satisfied indolence too proud to earn information ; but, although the light suddenly thrown upon the dark spot rather startled the dreamers, they have now had time enough to rub their eyes and rise to healthier action.

While no statement of fact nor inference has been confuted, the subject may be dismissed in the words of regret used by the father of modern Hygiene, Dr. William Guy, who on closing a similar discussion thus expressed himself:—
“ The want of proper standards of comparison
“ has obliged the writer to speak doubtfully upon
“ points concerning which all would be glad to
“ be able to offer a more positive opinion.”

Surely, then, it is not untrue, that “ There is no
“ subject in the whole range of pathology which
“ more urgently requires a thorough reform than
“ that of pulmonary consumption.” This is the opening sentence of the most recent clinical

lectures on phthisis. It refers to the dangerous tenets of medical doctrine up to this day taught in the medical schools as undisputed truths, and having in practice a most pernicious effect on the prevention and treatment of phthisis. It is significant that the needed reformation lies in the direction backwards to the teachings of Addison, whose unread or forgotten work, unread because of its peculiarity, is now restored, and its lessons no longer scouted, but accepted, since receiving a fresh afflatus of foreign inspiration.* Placing him side by side with the latest

* The identity of the teachings of Professor Niemeyer and Dr. Thomas Addison, is exhibited in the following quotations:—The former says:—"upon section of the lung, small points of induration we almost always found projecting above the surface of the cut in the shape of yellow nodules. We must beware of immediately assuming such minute solid spots to be tubercles. * * Many objects which at first glance seem to be initiary tubercles, and which were formerly regarded as such, prove, upon closer inspection, to be transversely divided bronchi with caseous contents. * * * By avoiding such errors in post-mortem examination, we shall arrive at the conclusion that not a single tubercle exists in very many phthisical lungs." The latter said:—"On incising such a lung, the truncated extremities of the more minute tubes, have very often been mistaken for simple tubercles, in consequence of their canals having been so encroached

great reformer, it is felt that in the one we study the thoughts of an original investigator into a newly struck vein of inquiry, and in the other read the skilfully marshalled arguments of a masterly reviewer. But author and scholiast are both needed to drive new truths into old heads, prostrate as the average *mens medica* usually is at the shrine of obsolete authority.

While reforming the pathology of pulmonary consumption, it is well that our leading pathologists are also reforming that injurious *specialism* which has so long been the chief obstacle to advancement in this particular department of medical practice. Of no disease equally with phthisis is it so essentially necessary to watch the inception, and guard against the onset, by efficient prophylaxis, and no class of medical

“upon, as to escape observation. * * * Such tubes, “when they contain puriform mucus, as they generally do, “are perpetually being mistaken for tubercles softening in “the centre.”

To this, as to another opinion, Dr. Addison had probably “made few converts,” though, nevertheless, he very likely “entertained no doubt whatever about the matter.” Nor will others entertain much doubt, now that after five and twenty years the opinion is so fully corroborated, in language of remarkable similarity.

advisers can be so competent to do this thoroughly as those who are constantly observing, in their daily intercourse with their usual patients, the operation of the multifarious agencies of the malady, at periods of life and growth when the errors of nutrition and neglected hygiene that insidiously bring on the cachexia, or "vulnerability" of constitution, are too commonly made—a class of medical men sometimes superciliously spoken of as "*general practitioners*." It is they who see the beginning of the train of morbid processes, better than the mere specialist, who seldom witnesses those all-important initiative stages, because, being only a "*consumption curer*," the disease is seldom brought under his notice before it is fully formed and past the power of remedy, and when for him it merely remains gravely to shake his head and dolefully say "too late, too late," or worse still, excite delusive hope while plying useless nostrums. It is the former who should be masters of the whole subject.

*"Principiis obsta. Sero medicina paratur
Cum mala per longas convaluere moras."*

If they be not fully conversant with their business, but evade their responsibility and relegate

their work to others, then two different classes in the profession are passive agents in spreading the disease—the one from ignorance, the other from lack of opportunity—one from ignorance making patients whom the other from lack of knowledge cannot cure. If ever phthisis is to be sensibly diminished, it will only be through the masterly efficiency of the ordinary medical adviser, the “doctor” *par excellence* of our vernacular idiom, but the “*general practitioner*” of legal slang and the cant of specialism.

In the wide range of the medical art there is no other subject about which error has so deeply imbued the minds of specialists. It is not unnatural that their prejudices grow inveterate, because the public trust to them, as they treat the disease—by the overwhelming influence of a name. In therapy and pathology alike has specialism ever hindered improvement and retarded progress, by implicit obstinacy in abiding by names instead of intellectually studying things. It is a psychological corollary that minds of one idea should drop into the unity of specialism.

Dr. Thomas Addison, who was what Niemeyer

now is, a general physician, and who, because he would not become a specialist, was enabled to add several new forms of disease to the nosology—that is to say, to define the previously undistinguished—hopelessly strove to point out to the specialists of his time “the dangerous tenets of the doctrines” which absolutely governed them. But against their opinions his demonstrations were unavailing, his labours were vain, and had almost been forgotten, when a “renewed study of the whole question” reinstated them to a just appreciation.

This instructive episode in the mutations of medical opinion should teach specialists to be very diligent in searching for better knowledge of what they would fain set themselves up as final judges, and a little less dogmatic in asserting the superiority of their stereotyped systems.

Many are beginning to adopt an intelligible theory of phthisis for the fundamentally wrong principles followed by them for fifty years, in routine treatment of the disease. Yet all that while they had been inculcating the idea into the public mind how that they alone held exclusive

possession of the key to the treasury of knowledge, and so plausibly, that their specious arguments obtained public credence ; which having easily secured, it is not very wonderful that they rested quite satisfied with the doctrines of phthisis as taught to them in their early days.

Before concluding it may be expedient to anticipate a possible objection which may be raised against trusting too much to accuracy of diagnosis. But errors in this direction do not greatly vitiate statistics, because, as could be shown by numerous instances in the experience of others, as well as many that have come under the writer's personal observation, mistakes of this kind both lessen and increase the number of recorded cases. As in all sciences of observation, there is in medical diagnosis an impossibility of absolute accuracy in a total number, arising from the individual peculiarities of observers. Even among astronomers allowance has to be made for such causes of difference ; but as in that most exact of sciences, so is it in the less perfect science of medicine, found by experience that there is, in errors of observation, an

adjusting or compensating quality, producing in the aggregate result a true mean.

It will have been observed that free use has been made of citations, wherever it was prudent to enforce a point indisputably in the words of the wisest and the best men who have become foremost as instructors of the whole profession.

Having done so, we trust that those who had not sufficient faith to accept the arguments adduced in the work to which this is supplementary, will in a right spirit receive the additional facts which are now put before them; and that they will in all candour feel able to arrive at a clearer opinion than before on the subject which has been on their behalf so amply discussed.

FINIS.

